



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,949	12/13/2001	Brian Fahs	10019980-1	7384

7590 10/05/2004

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
----------

KANG, INSUN

ART UNIT	PAPER NUMBER
----------	--------------

2124

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/016,949

Applicant(s)

FAHS ET AL.

Examiner

Insun Kang

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2124

### **DETAILED ACTION**

1. This action is responding to application papers dated 12/13/2001.
2. Claims 1-18 are pending in the application.

### ***Specification***

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The abstract does not contain sufficient description of the invention.

Appropriate correction is required.

### **4. Content of Specification**

Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

The summary of the invention (page 3) does not contain sufficient description in order to contribute to an understanding of the invention and the title "Disclosure of the invention" needs to be replaced with "Summary of the invention."

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3-6 and 9-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Per claim 3, it is unclear as to which performance analysis tool in line 20 it is referring. It is interpreted as "said performance analysis tool."

Per claim 4, it is unclear as to which performance analysis tool in line 27 it is referring. It is interpreted as "said performance analysis tool."

Per claim 9, it is unclear as to which performance analysis tool in line 15 it is referring. It is interpreted as "said performance analysis tool."

Art Unit: 2124

Per claim 10, it is unclear as to which performance analysis tool in line 20 it is referring. It is interpreted as "said performance analysis tool."

As per claims 5, 6, 11, and 12, these claims are rejected for dependency on the above rejected parent claims 9, 10, 15, and 16.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-6 are non-statutory because they are directed to a "computer-implemented method" without recitation of a computer or a computer-readable medium embodying the method. The claims merely recite a "computer-implemented method" that is disembodied arrangement so as to be called a "computer program" or compilation of facts, information, or data *per se*, without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer ("acts") or computer readable medium so as to enable the computer to perform the claimed steps of identifying an inlined function, using a performance analysis tool, creating a data structure, etc as recited.

Thus the claims represent non-functional descriptive material that is not capable of producing a useful result, and hence represent only abstract ideas.

Art Unit: 2124

Therefore, the claims are non-statutory.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hundt ("HP Caliper – An Architecture for Performance Analysis Tools," 8/2000).

Per claim 1:

Hundt discloses:

- identifying an inlined function ("Probes are inlined into functions and instrumented functions are relocated...Function entry points are identified by analysis of the unwind information tables (sometimes called exception tables), the procedure lookup tables, and the symbol table...The analysis may still miss some function entry points because of a lack of unwind information and symbolic information. However, these functions are discovered dynamically. Whenever a call target cannot be found in the internal function dictionary during instrumentation, a break is inserted at the target address of a call branch, assuming it to be a function entry point," section 4.1 Algorithm)

Art Unit: 2124

-and using a performance analysis tool to perform a desired task on said inlined function ("The function is analyzed for instrumentability, probe codes are inlined into the function... counters are created, and an instrumented version of the function is moved to shared memory. The original function's entry point I patched with a long branch instruction to its instrumented version," section 4.1 Algorithm) as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Hundt teaches:

-creating a data structure which maintains location information for said inlined function and information related to said desired task for said inlined function ("The function is analyzed for instrumentability, probe codes are inlined into the function, IP-relative references are updated, counters are created, and an instrumented version of the function is moved to shared memory. The original function's entry point I patched with a long branch instruction to its instrumented version," section 4.1 Algorithm) as claimed.

Per claim 3:

The rejection of claim 1 is incorporated, and further, Hundt teaches:

-using a performance analysis tool to perform instrumentation on said inlined function ("The process runs until it hits one of the inserted break instructions at the entry point of a function... and the instrumentation process begins at the current function," section 4.1. Algorithm) as claimed.

Art Unit: 2124

Per claim 4:

The rejection of claim 1 is incorporated, and further, Hundt teaches:

- using a performance analysis tool to perform mapping of samples to said inlined function ("The Caliper Support Library offers a framework of services and tools for dynamic instrumentation and sampling," page 3 last paragraph; "a strong set of tools and methods used to analyze and monitor run-time behavior of a program. Statistical sampling and binary instrumentation are two of the major techniques," page 1 paragraph 4) as claimed.

Per claim 5:

The rejection of claim 3 is incorporated, and further, Hundt teaches:

- said performance analysis tool is comprised of an instrumentation application ("The Caliper Support Library offers a framework of services and tools for dynamic instrumentation and sampling," page 3 last paragraph; "a strong set of tools and methods used to analyze and monitor run-time behavior of a program. Statistical sampling and binary instrumentation are two of the major techniques," page 1 paragraph 4) as claimed.

Per claim 6:

The rejection of claim 4 is incorporated, and further, Hundt teaches:

- said performance analysis tool is comprised of a sampling application ("The Caliper Support Library offers a framework of services and tools for dynamic



Art Unit: 2124

instrumentation and sampling,” page 3 last paragraph; “a strong set of tools and methods used to analyze and monitor run-time behavior of a program. Statistical sampling and binary instrumentation are two of the major techniques,” page 1 paragraph 4) as claimed.

Per claims 7-12, they are the computer-readable medium versions of claims 1-6, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-6 above.

Per claims 13-18, they are the apparatus versions of claims 1-6, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1-6 above.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 703-305-6465. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 703-305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2124

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Insun Kang  
9/28/2004

*Kakali Chaki*  
KAKALI CHAKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100